National Rural Electric Cooperative Association

A Touchstone Energy® Cooperative

4301 Wilson Boulevard
Arlington, Virginia 22203-1860
Telephone: (703) 907-5500
TT-(703) 907-5957
www.nreca.org

June 26, 2002

Ms. Roberta D. Purcell
Assistant Administrator, Telecommunications Program
Rural Utilities Service
Room 4056-S
Stop 1590
1400 Independence Avenue, SW.
Washington, DC 20250-1590

Dear Ms. Purcell,

I am writing on behalf of the National Rural Electric Cooperative Association (NRECA) in response to the Rural Utilities Service (RUS) Notice of Public Meeting on Rural Broadband Access which appeared in the June 12, 2002 *Federal Register*. 67 Fed. Reg. 40,268. NRECA will not present oral testimony at the RUS Public Meeting on Rural Broadband Access. However, we wish to provide background information for your consideration in implementing and administering the telecommunications broadband loan program. We would like to thank the RUS for this opportunity to provide information on these important issues.

NRECA is the not-for-profit, national service organization representing 930 rural electric systems that provide electric service to 35 million customers, or approximately 12 percent of the U.S. population. Rural electric cooperatives are found in 46 states and in 2,500 of the nation's 3,128 counties. NRECA and its members believe access to broadband service will be vitally important to the future of rural communities. Many NRECA members, are, in fact, currently providing telecommunications services to consumers. Yet, much of rural America remains without the infrastructure that can deliver high-speed, high quality, affordable telecommunications services.

The challenges are to transmit data reliably, and at high speed, over long distances, at an acceptable cost to the consumer and with sufficient revenue return to the broadband service provider. To date it has been a daunting task to blend those ingredients into a palatable brew. Affordable financing will be a critical ingredient, but it must be structured in such a way as to facilitate partnerships, including public-private ventures and other creative means to achieve the goal of bringing broadband to rural America. This flexibility in the types of broadband projects eligible for the new

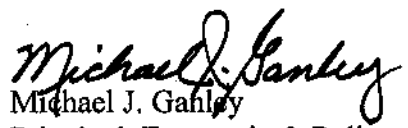
broadband loans and guarantees would leverage the federal financing as well as mitigate risk.

We have attached as background information, a report entitled "Broadband for Rural America, 2002 Status Report" which was prepared for NRECA and the National Rural Telecommunications Cooperative (NRTC). That report not only provides a helpful summary of deployment statistics and technologies available, it also concludes that there is a role that electric cooperatives could play in the delivery of broadband services in their rural communities.

We have also attached Comments on Deployment of Broadband Networks & Advanced Telecommunications, filed by NRECA in December 2001 with the National Telecommunications Information Administration in Docket No. 011109273-1273-01. NRECA remains committed to the idea that "access for all" should be the nation's policy goal in deploying broadband services. The RUS telecommunications broadband funding program will be an important step towards accomplishing that goal.

NRECA will submit detailed comments on the challenges of deploying broadband service to rural America within 30 days.

Respectfully submitted:



Michael J. Gahley
Principal, Economic & Policy Analysis
NATIONAL RURAL ELECTRIC
COOPERATIVE ASSOCIATION
4301 Wilson Boulevard
Arlington, VA 22203

National Rural Electric Cooperative Association
A Touchstone Energy® Cooperative

4301 Wilson Boulevard
Arlington, Virginia 22203-1860
Telephone: (703) 907-5500
TT-(703) 907-5957
www.nreca.org

December 19, 2001

Ms. Josephine Scarlett
Office of the Chief Counsel
National Telecommunications And
Information Administration
Room 4713 HCHB
1401 Constitutional Avenue, NW
Washington, DC 20230

RE: Docket No. 011109273-1273-01, Comments on Deployment of Broadband Networks & Advanced Telecommunications

Dear Ms. Scarlett:

I am writing on behalf of the National Rural Electric Cooperative Association (NRECA) in response to the Notice, Request for Comments on Deployment of Broadband Networks and Advanced Telecommunications (Notice) published in the *Federal Register* of November 19, 2001 and the Correction published in the *Federal Register* of November 26, 2001. We would like to thank the National Telecommunications and Information Administration for this opportunity to provide comments on these important issues.

NRECA is the not-for-profit, national service organization representing 930 rural electric systems that provide electric service to 35 million customers, or approximately 12 percent of the U.S. population. Rural electric cooperatives are found in 46 states and in 2,500 of the nation's 3,128 counties. Many NRECA members, are, as are other electric utilities, providing telecommunications services to consumers. We firmly believe that widespread broadband availability will enable new and improved consumer products and services and business opportunities to reach the people and businesses in the communities served by rural electric cooperatives.

Our comments are limited to responses to questions A, B, C, D, I, and K.

A. <u>What should be the primary policy considerations in formulating broadband policy for the country?</u>

"Access for all" should be the <u>primary</u> consideration of a national policy on broadband. According to the NTIA's study conducted with the Rural Utilities Service of the U.S. Department of Agriculture, "...Rural areas are currently lagging far behind

urban areas in broadband availability" (NTIA/RUS Report)[1]. Experts agree that access to broadband services will be a key prerequisite to the well being of any community in the USA: urban, suburban or rural. Lack of access will ensure that the community will experience significant deficits. As the NTIA/RUS Report concludes, "The rate of deployment of broadband services will be the key to future growth of every region, particularly in rural areas that can benefit from high-speed connections to urban and world markets.[2] Some of the reasons broadband access may be of particular concern to rural communities include:

- **Economic Development** – Access to broadband services is now important to businesses of any substantial size (and to smaller businesses as well). Broadband telecommunications access has become a necessary amenity for many businesses. If a given community does not have broadband access, many businesses seeking to relocate will simply move on to consideration of a community that does.

  Often broadband access is not only important to the business seeking a location, but also to the employees of such businesses who may be relocating from areas where broadband access (at home, at their children's schools, etc.) was readily and pervasively available. The unavailability of broadband telecommunications service (at home) may make it more difficult for a relocating employer to convince skilled employees to locate (or relocate) for employment purposes to a given community.

  Increasingly, home-based businesses and professionals utilize (or at least want access to) broadband telecommunications services. Many small business entrepreneurs and highly paid professionals might wish to spend more time at "weekend" or "vacation" homes in rural areas if broadband communications service were available in these locations to facilitate their ability to work from these locations. It stands to reason that the more time these part-time residents spend in their (rural) weekend or vacation homes, the greater economic (and possibly social) contribution they will make to these rural communities.

- **Education and Distance Learning** – Opportunities for advanced or specialized education and training may be limited in (or proximate to) many rural communities. Interactive distance learning utilizing broadband communications channels can be used to widen the scope of educational and training opportunities available in rural communities.

- **Telemedicine** – Most hospitals serving rural communities cannot support the expert medical staff needed to provide many types of specialty care. Absent other alternatives, residents of rural communities requiring such care are faced with the further inconvenience (and perhaps additional risk to their health, in

[1] Advanced Telecommunications in Rural America, the Challenge of Bringing Broadband Service to All Americans, NTIA and RUS, April 2000 at Executive Summary p. ii.
[2] Id.

some) of having to travel long distances to receive the diagnosis and treatment that they need. Low speed data access does not readily support the transmission of high resolution medical images and the sort of real-time, high-quality video teleconferencing that is needed to provide quality care (i.e. by bringing the needed medical expertise to bear remotely). For example, available evidence suggests that lower resolution medical imaging leads to diagnostic mistakes in surprising number of cases.

- **Community Development and Well Being** – The "aging" of many rural communities is an observable phenomenon. The kids grow-up and move to more urban or suburban communities where employment opportunities may be greater and different amenities are available. If broadband service is unavailable in a rural community, it is one more, perhaps key or critical amenity which is lacking. Many are worried about this "digital divide" further eroding the viability of the communities they live in and cherish.

We agree with the recent policy objectives set forth by Michael K. Powell, Chairman of the Federal Communications Commission, that "The Nation should commit to achieving universal availability of broadband."[3] And, we concur with Chairman Powell that "the universal service goals of ubiquity and affordability remain paramount" and that economically sound ways should be pursued to reach these objectives.[4] As the NTIA/RUS Report also noted, the rate of deployment of broadband "has implications for the welfare of Americans and the economic development of our nation's communities." Therefore, policies that support the primary goal of "access for all" are those that remove barriers – regulatory, financial and otherwise – and encourage the widespread deployment of broadband service in an expeditious manner.

B. <u>How should broadband services be defined?</u>

There is no single, agreed upon definition of broadband. Defining broadband is important in so far as it defines eligibility for funding programs or triggers regulatory requirements. As FCC Chairman Powell has recently noted, battles are being waged over how to define broadband. It would be a great disserve to the nation to dwell on philosophical or technical debates on a definition to the point that implementation of federal policies that enable broadband availability for all Americans is unnecessarily delayed. Assuming that the definition of broadband finally adopted is sufficiently broad and inclusive of multiple technology platforms, applications, and service providers, a consistent or at least compatible definition across all federal agencies would provide necessary clarity. Defining broadband is very important to electric cooperatives seeking to participate in bringing broadband to the communities they serve when this definition determines eligibility of the service for funding under various programs promoting

[3] Michael K. Powell, Chairman, Federal Communications Commission, Press Conference, "Digital Broadband Migration" Part II (Oct. 23, 2001).
[4] Id.

broadband service deployment which are administered by federal agencies. And, a definition is likely to form at least a partial basis for regulatory or filing requirements.

Broadband has been defined by some as any technology that allows a user to connect to the Internet at speeds faster than a 56K modem and which can be connected to the Internet 24 hours a day without prolonged interruptions. The FCC uses a general definition for "advanced telecommunications capability" that is: any connection that allows 200,000 bits per second (200 kbps) of information to be sent to a user's computer from the Internet Service Provider (i.e. "downstream") and from the user's computer to his/her Internet Service Provider (i.e. "upstream"). This two-way requirement of 200 kbps is presently a barrier to the growth of certain high-speed services to rural America. As noted by the National Rural Telecommunications Cooperative (NRTC) in recent comments to the FCC[5], Ku-band satellite Internet service now available and being deployed is a "necessary first step for rural telecommunications providers and subscribers before the Ka-band services arrive." And as NRTC also noted in its comments, the FCC's definitions have influenced other agencies in their development of policies to promote advanced telecommunications services.[6] As this illustrates, a definition that relies solely on a data speed rate, while having the clarity of a "bright line" test, may unnecessarily exclude promising technologies that can deliver faster than dial-up service to consumers.

FCC Chairman Powell recently characterized a wider definition of broadband in the following way:

- It is a medium that offers a wide potential set of applications and uses;
- The "broad" in broadband should be recognized as meaning more than the "fat, fast pipe." It should represent the nearly infinite possible uses and applications that might be developed and that a consumer might use.
- Broadband should be viewed holistically as a technical capability that can be matched to consumers' broad communication, entertainment, information, and commercial desires.
- The indispensable components of broadband functionality are:
  - A digital architecture,
  - Capable of carrying Internet Protocol (IP) or other multi-layered protocols,
  - Has an "always on" functionality,
  - Capable of scaling to greater capacity and functionality as uses evolve and bandwidth hungry applications emerge.
- Broadband is not limited to a specific technological foundation (i.e. copper, coaxial cable, wireless).[7]

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[5] NRTC Comments at p. 1, In the Matter of Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, FCC Docket No. 98-146 (Sept. 24, 2001).

[6] NRTC Comments at p. 3.

[7] Michael K. Powell, Chairman, Federal Communications Commission, Remarks at the National Summit on Broadband Deployment, Washington, D.C. (Oct. 25, 2001).

Others have suggested that what most residential and small business users are most interested in when they speak of "broadband" is fast access to the Internet, for example High Speed Internet service. Recently the *New York Times* stated that a growing number of consumers are pursuing a third path for high-speed Internet service: fixed-wireless technology which uses radio signals rather than copper wire, cable or fiber to send data.[8] A square antenna on top of a house enables high-speed access to the Internet. This suggests that a definition of broadband should include the different types of technology and uses or applications that are or may soon become available. This type of definition, while less simply stated, provides the type of flexibility needed to foster variety in the types of broadband technology platforms that are deployed.

C. What is the current status of (1) supply and (2) demand of broadband services in the United States?

NRECA agrees with FCC Chairman Powell's suggestion that broadband progress and success should be measured by access or availability (supply) and not by adoption rates (demand).[9] Our comments focus on the supply side of this question. As noted by Assistant Secretary of Commerce Nancy J. Victory at the recent NARUC Broadband Summit, broadband service over cable and DSL (combined) platforms is currently available to 50%-60% of rural homes and businesses.[10] It should be noted that many rural communities have no cable service at all. A fairly recent study suggests that 72% of communities over 250,000 have some type of cable-based broadband, but less than one-fifth of one percent (<0.20%) of communities under 1,000 have cable modems deployed.[11] Even in those areas of rural America where there is some cable service, it may not extend to the entire community (i.e. the areas "outside of town" where densities are very low).[12] If there is no cable service, there can be no broadband cable service. A reasonable conclusion is that absent significant increases in density, rural populations, which are presently not served by a cable company, are unlikely to be served in the future. In part this may be due to competition from satellite service providers and or telephone companies who can provide multi-channel TV services and broadband services to customers now or in the very near future.

The Regional Bell Operating Companies (RBOCs) or other large telephone companies serve the majority of telephone customers in rural America. Recently, the RBOCs and other large Incumbent Local Exchange Carriers (ILECs) have been aggressively deploying and promoting DSL in certain portions of their service territories. As a matter of economics and business focus, their efforts to deploy and promote DSL

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[8] Eve Tahmincioglu, *For High-Speed Access to the Web, a Dish-to-Dish Route*, N.Y. Times, Oct. 11, 2001, at G-9.

[9] See note 7.

[10] Nancy J. Victory, Address to NARUC Broadband Summit, regarding information gathered during NTIA's Oct. 12, 2001 Broadband Forum (Oct. 25, 2001).

[11] Brian Staihr, The Broadband Quandary for Rural America, The Main Street Economist, Center For The Study Of Rural America–Federal Reserve Bank of Kansas City (Aug. 2000) *available at* http://www.kc.frb.org/RuralCenter/mainstreet/MSE_0800.pdf.

[12] NTIA/RUS Report at pp. 18-19.

have centered principally within their large population centers. In August 2000 a study suggested that for DSL, in regions served by the largest ILECs, 86% of communities with 250,000 residents or more have some amount of DSL deployed while virtually no communities under 1,000 residents have DSL service available.[13] Absent a regulatory push, most rural communities of 5,000-10,000 customers or less which are served by one of the RBOCs or a large independent ILEC are unlikely to have ILEC-provided DSL service anytime in (at least) the next couple of years.

The picture is somewhat different relative to rural communities served by telephone cooperatives or small, locally owned telephone companies. Many of these providers are making a substantial effort to make sure that DSL is available in at least some portion of the territories they serve, even though it may not be profitable for them to do so. Many smaller companies have invested in infrastructure that was funded through the Rural Utilities Service. One condition for receiving RUS funding is that the network built with such funds must be capable of supporting advanced services such as DSL. Since 1993, RUS has funded more than $2 billion in rural telecommunications infrastructure for smaller ILECs. The relatively recent National Exchange Carrier Association cost study[14] found that rural ILECs are rapidly deploying broadband technology. According to this study, ILECs will have upgraded 65% of their access lines to be capable of providing DSL by the year 2002. In November 2000 the National Telecommunications Cooperative Association reported from a survey of its members that: approximately 55% of respondents were offering some form of high-speed service to residential customers and 61% were offering some form of high-speed service to business customers. [15]

D. Should government adopt as a goal "access to all" to broadband service? What would be the costs of such a goal? What policy initiatives, if any, should be considered to achieve that goal? Are there areas or persons that are unlikely to be served through marketplace forces?

As we note in our response to Question A, the government's primary policy goal should be "access for all" for broadband services. While it is important to answer the question of what the price tag will be to accomplish that goal, the deployment cost is not meaningful without considering that figure in context: what is the cost to society and the national economy if "access for all" is not the foremost objective? As discussed above in our response to Question A, the deployment of broadband to rural areas can address a number of important social and economic problems. These policy concerns were echoed in the NTIA/RUS Report, which states: "the government also has a special obligation to ensure that all Americans, including Americans living in rural communities, have the opportunity to be full participants in the Information Age."[16]

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[13] See note 9.

[14] National Exchange Carrier Association Rural Broadband Cost Study: Summary Of Results (Jun. 21, 2000).

[15] National Telephone Cooperative Association Members Internet/Broadband Survey Report (Nov. 2000).

[16] NTIA/RUS Report at p. 41.

As the NTIA/RUS Report documents, the deployment of broadband services to rural America presents a considerable challenge. Specifically, this report notes that rural areas with the lowest population density are likely to be the last to be served.[17] These are the areas that typically are served by rural electric cooperatives. In its second report to Congress, the FCC identified consumers in sparsely-populated, rural regions as one of the groups that may be "particularly vulnerable" to not receiving timely access to broadband services.[18] This was also the conclusion of the panel of experts convened at the NARUC Broadband Summit on October 26, 2001.[19] The panelists agreed that the business case simply can not be made for deploying broadband services, particularly via wireline technologies, in many rural areas. Markets will not work in many cases and creative, local solutions may need to be found. Some examples of such local solutions, such as community-based aggregated demand, were highlighted at the NARUC Broadband Summit. However, it remains to be seen whether these types of initiatives will be able to facilitate widespread rollout of broadband in a timely fashion in all rural areas.

It appears then to be well documented that for many rural areas, markets will fail to provide broadband services in the near future. This is not unlike the situation faced by rural America in the 1930s with regard to electricity. NRECA agrees with the findings of the NTIA/RUS Report regarding broadband: "Competition leads to lower prices, more customer choice, rapid technological advances, and faster deployment of new services. Given the unique challenges of rural Americans, however, other government policies must be considered as well."[20] The NTIA/RUS Report advocated a number of government policies that should be advanced to accomplish the goal of ensuring that all Americans, including those in rural areas, have access to broadband services. NRECA supports these policies and encourages the NTIA to work with other federal agencies and the states to expand existing governmental programs that promote broadband deployment. NRECA further urges that programs be developed, such as universal service and other funding mechanisms, and research and development projects that advance promising technologies for broadband deployment in rural areas. As noted in our response to Question B above, the definition of broadband needs to be such that program eligibility extends to multiple providers of various technology platforms –including rural electric cooperatives– who can bring a diversity of choices to rural Americans that most urban areas already enjoy.

I. What problems have companies experienced in deploying broadband services via wireless and satellite?

[17] NTIA/RUS Report at p. 17.
[18] FCC, Deployment of Advanced Telecommunications Capability: Second Report, FCC 00-290 at p. 6 (Aug. 2000).
[19] Panel: Facilitating the Business Case for Rural Broadband Deployment, NARUC Broadband Summit, Washington, DC (Oct. 25-26, 2001).
[20] NTIA/RUS Report at p. iv.

The main impediment to the deployment of wireless or satellite broadband services has been the FCC's definition of "advanced telecommunications capability" because it tends to overlook the importance of current-generation Ku-band services, which do not provide 200 kbps upstream. Congress and other federal agencies have frequently used the FCC's definition to determine carrier eligibility for proposed tax incentives, grants, guaranteed loans, and other forms of relief to promote rural broadband deployment. While Ka-band satellites promise tremendous improvement in two-way advanced telecommunications capability for rural America, an important opportunity has been largely missed. Despite this impediment, rural satellite Internet providers offering Ku-band services have gained valuable experience in the techniques necessary to provide broadband service to the most rural areas of the United States. Their experience will be extremely valuable when applied to the deployment of the faster Ka-band services in the coming years.

Consumers generally benefit when there are multiple service providers. In rural areas, that will likely require a mix of technologies. The limitations placed on Ku-band providers by the FCC definition has constrained whatever competitive pressures might have been placed on other technologies to provide timely access to broadband service in rural areas.

K. Would it be appropriate to establish a single regulatory regime for all broadband services? Are there differences in particular broadband network architectures (e.g., differences between cable television networks and traditional telephone networks) that warrant regulatory differences? What would be the essential elements of a unified broadband regulatory regime?

NRECA is generally skeptical of "one size fits all" approaches to regulation given that the costs of regulation to small businesses are disproportionately large compared to larger firms.[21] Too often, the "fit" is especially poor for smaller and not-for-profit enterprises, like rural electric cooperatives. For rural areas, the use of different technologies, or hybrid systems combining different technologies, may be necessary to overcome rural areas' triple challenge of density, distance and terrain. Therefore, regulatory regimes that have the effect of dictating technologies, because different regulations create different burden levels, should be avoided. Further, regulatory regimes that foreclose opportunities for some broadband service providers, namely smaller or not-for-profit providers such as cooperatives, are equally undesirable. However, to the extent a single regulatory regime can promote a multi-faceted approach to broadband deployment, that is, encourage multiple providers and multiple technologies, then such a regime may have merit. Generally, NRECA supports FCC Chairman Powell's call for broadband service existing in "a minimally regulated space."[22]

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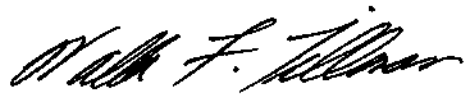
[21] Most rural electric cooperatives meet the Small Business Administration's small business size regulations, i.e. entities which provide electric services are "small entities" if they dispose of 4 million MWH of electricity or less per year. 13 C.F.R. § 121.201.

[22] See note 3.

Again, we commend NTIA for providing this forum for expressing our views and concerns on the deployment of broadband services.

Respectfully submitted,



Wallace F. Tillman
Executive Vice President, Energy Policy
& General Counsel

Michael J. Ganley
Manager, Economic & Policy Analysis

Tracey B. Steiner
Corporate Counsel

NATIONAL RURAL ELECTRIC
COOPERATIVE ASSOCIATION
4301 Wilson Boulevard
Arlington, VA 22203